

Ego Identity, Self-Esteem, Locus of Control, and Purpose in Life Among College Students: A Mediation Analysis

Q. J. Miller ¹

¹ Independent Researcher, Edinburgh, United Kingdom

Correspondence: Q. J. Miller (qjmil@proton.me)

ABSTRACT – This study examined whether self-esteem and locus of control mediate the relationship between ego identity and purpose in life among college students. A sample of 184 students completed the Ego Identity Scale, the Rosenberg Self-Esteem Scale, the Purpose in Life Test, and an abbreviated version of the Rotter Internal–External Locus of Control Scale. A parallel mediation model tested whether self-esteem and locus of control accounted for the association between ego identity and purpose in life. Ego identity positively predicted purpose in life both directly and indirectly through self-esteem. The indirect effect via self-esteem was significant, indicating partial mediation, whereas locus of control did not mediate or significantly predict purpose. Findings suggest that a coherent and accepting sense of self enhances purpose in life primarily through elevated self-worth rather than perceived control. Results emphasize self-esteem’s role in linking identity integration and existential meaning during younger adulthood.

Keywords:

Ego identity; Self-esteem; Purpose in life; Locus of control; Mediation; College students

Published:

November 14, 2025

Introduction

The pursuit of a meaningful and coherent sense of self represents a fundamental human motivation across the lifespan (Frankl, 1963; Ryff & Keyes, 1995). According to Erikson’s (1959, 1982) psychosocial theory, ego identity, a sense of wholeness, coherence, and acceptance regarding one’s life, constitutes the culmination of healthy identity development. Though Erikson conceptualized ego identity as a resolution of late adulthood, contemporary research suggests that

the psychological processes underlying it, that is, self-reflection, coherence, and self-acceptance, emerge earlier and may play an important role in well-being during young adulthood (Whitbourne et al., 2002; Bauer & McAdams, 2004).

College students, often in the midst of exploring identity commitments, values, and goals (Arnett, 2000), represent a population in which self-integrative capacities like ego identity may foster adaptive outcomes. Specifically, integrative self-reflection may strengthen self-esteem, support a stronger sense of purpose in life, and align perceptions of control with internalized values. This study investigates how ego identity relates to purpose in life among college students across various age groups and examines self-esteem and locus of control as possible mediating mechanisms.

Ego identity entails viewing one's life as meaningful, coherent, and acceptable, integrating both achievements and failures into a unified sense of self (Erikson, 1982). Individuals high in ego identity tend to experience higher life satisfaction, lower despair, and greater psychological well-being (Ryff & Keyes, 1995; Westerhof et al., 2017). Although research has focused primarily on older adults, cross-sectional and longitudinal evidence suggests that integrative meaning-making occurs throughout adulthood and predicts adaptive outcomes, including personal growth, self-acceptance, and positive affect (Bauer et al., 2015; King, 2001).

In younger adults, ego identity may reflect the ability to synthesize emerging experiences into a coherent identity and maintain self-acceptance amid uncertainty. This integrative perspective may promote a stable sense of and a direction for one's life. For example, Tan, et al.'s (1977) 12-item Ego Identity Scale captures self-reflective coherence and reconciliation with the self—qualities that support both self-esteem and purpose (Whitbourne et al., 2002). Thus, ego identity may serve as a foundation for well-being even in early adulthood.

Self-esteem, or one's global evaluation of self-worth (Rosenberg, 1965), consistently predicts positive psychological outcomes including optimism, resilience, and life satisfaction (Orth & Robins, 2014; Sowislo & Orth, 2013). Empirical research supports strong links between self-esteem and meaning or purpose in life. Individuals who regard themselves positively are more likely to perceive life as meaningful and pursue valued goals (Schlegel & Hicks, 2011; Steger et al., 2008). Self-esteem can also function as a psychological buffer, enabling individuals to integrate negative experiences without losing a coherent self-concept (Heine et al., 2006).

Ego identity, by promoting acceptance of one's life narrative, may bolster self-esteem through reduced self-criticism and increased coherence. Individuals high in ego identity view their life story as internally consistent and valuable (Bauer & McAdams, 2004). This self-acceptance, in turn, may facilitate a stronger sense of purpose, which entails perceiving one's life as guided by meaningful goals (Ryff, 1989). Indeed, self-esteem has been shown to mediate associations between broad self-concept integration and life purpose (Schulenberg, Schnetzer, & Buchanan, 2011; Routledge et al., 2010). Accordingly, it is possible that self-esteem would mediate the relationship between ego identity and purpose in life.

Locus of control refers to generalized beliefs about the degree to which life outcomes are determined by internal versus external forces (Rotter, 1966). Individuals with a more internal locus of control perceive themselves as responsible for their successes and failures and typically report greater psychological adjustment, academic success, and well-being (Benassi, et al., 1988;

Lefcourt, 2014). In contrast, external control beliefs, described as attributing outcomes to luck or fate, are associated with lower self-efficacy and depressive symptoms (Judge et al., 2002).

Despite its links to motivation, locus of control may not predict existential outcomes such as purpose. Whereas purpose in life involves a sense of direction and coherence, locus of control might be conceived as concerning perceived agency. Research suggests that self-esteem and control beliefs are correlated yet distinct self-evaluations (Judge et al., 2002). Thus, while locus of control may influence goal-directed aspects of purpose, ego identity and self-esteem may better explain existential meaning. The present study includes locus of control as a parallel mediator to clarify its relative role compared to self-esteem.

Purpose in life, conceptualized by Crumbaugh and Maholick (1964) and refined by Ryff (1989), reflects the degree to which individuals perceive their existence as having meaning, direction, and intentionality. It predicts numerous positive outcomes including academic engagement, persistence, and lower depressive symptoms (Bronk et al., 2009; Schulenberg et al., 2011). Purpose often emerges from self-reflective processes that integrate past experiences with future goals (Bauer et al., 2015). Thus, understanding how ego identity contributes to purpose through self-evaluative variables may illuminate key mechanisms of well-being in young adulthood.

The present study examines how ego identity, self-esteem, and locus of control relate to purpose in life. Using mediation models, this study tests whether ego identity indirectly predicts purpose via self-esteem and locus of control in parallel. Based on prior literature, it was hypothesized:

1. Ego identity would positively predict purpose in life.
2. Self-esteem would mediate the relationship between ego identity and purpose.
3. Locus of control would not significantly mediate this relationship when examined alongside self-esteem.

Method

Participants

Participants were 184 students (107 women, 76 men, and 1 unidentified) recruited from a midsize university enrolled in various undergraduate and graduate psychology courses. The average age was 32.74 ($SD = 12.93$). Self-reported number of years in college ranged from less than 1 to 14 ($M = 3.22$, $SD = 2.36$, median = 3.00).

Measures

Ego Identity. The Ego Identity Scale (Tan et al., 1977) includes 12 items assessing confident perceptions of self and life roles coherence across time and situations. Each item has two statements from which participants choose as best describing themselves, e.g., “a) There are times when I don’t know what is expected of me; b) I have a clear vision of how my life will unfold ahead of me.” Higher scores reflect greater ego identity. Adequate reliability and validity have been reported (Tan et al., 1977).

Self-Esteem. The Rosenberg Self-Esteem Scale (Rosenberg, 1965) is a 10-item measure of global self-worth, e.g., “I feel that I have a number of good qualities.” Participants respond using

a 4-point scale (1 = Strongly disagree, 4 = Strongly agree). Extensive psychometric validation supports the scale (Twenge & Campbell, 2001).

Locus of Control. The Valecha and Ostrom (1974) 11-item short form of Rotter's Internal–External Locus of Control Scale assesses generalized control beliefs. The scale presents two statements from which participants choose to reflect their beliefs, e.g., “a) Peoples misfortunes result from the mistakes they make, b) In the long run people get the respect they deserve in this world.” Higher scores indicate more internal locus. The scale authors present evidence for reliability and validity (Valecha & Ostrom, 1974).

Purpose in Life. The Purpose in Life Test (Crumbaugh, 1968) consists of 20 items assessing the degree to which respondents perceive their lives as purposeful and meaningful, e.g., “My personal existence is...” Participants responded using a 7-point scale which varies by item but 1 = lesser purpose (e.g., “Utterly meaningless, without purpose”) and 7 = more purpose (e.g., very purposeful and meaningful). Higher scores indicate more purpose and meaning. Psychometric properties have been supported (Walters & Klein, 1980).

Procedure

Participants completed the scales as a hardcopy questionnaire. Participants were recruited and questionnaires completed prior to regular class meetings. Data was collected in accordance with the ethical guidelines of the Helsinki Declaration. Participation was voluntary and anonymous, with informed consent obtained according to institutional review board guidelines.

Data Analysis

Pearson correlations were computed among all variables. Hayes' (2018) PROCESS Model 4 tested parallel mediation of the effects of ego identity (X) on purpose in life (Y) via self-esteem (M_1) and locus of control (M_2). To control for sociodemographics, age, gender, and year in college were used as covariates. Indirect effects were estimated using 5,000 bootstrapped samples (95% CI). Results that do not include “o” in confidence intervals are considered statistically significant.

Results

As presented in Table 1, ego identity was positively correlated with self-esteem, internal locus of control, and purpose in life. Self-esteem was strongly correlated with purpose, while locus of control showed a smaller, though significant, correlation with self-esteem.

Table 1: Correlations and scale descriptive statistics

	1	2	3	<i>M</i>	<i>SD</i>	<i>α</i>
1. Ego identity				7.89	2.17	.537
2. Purpose in life	.46*			111.58	15.32	.804
3. Internal locus	.41*	.30*		7.46	2.39	.689
4. Self-esteem	.58*	.56*	.31*	32.41	4.93	.869

Note: $N = 184$. * $p < .01$

In the PROCESS model, while controlling age, gender and years of college, ego identity significantly predicted self-esteem ($B = 1.35$, $SE = 0.14$, $p < .001$) and locus of control ($B = 0.41$, $SE = 0.08$, $p < .001$). Controlling age, gender, years of college, self-esteem and locus of control, the direct effect of ego identity on purpose in life remained significant ($B = 1.31$, $SE = 0.58$, $p = .025$). In the latter model, when controlling other variables, self-esteem ($B = 1.313$, $SE = 0.24$, $p < .001$) but not locus of control ($B = 0.86$, $SE = 0.45$, $p = .059$) significantly predicted purpose.

Bootstrap confidence intervals confirmed that the indirect effect of ego identity on purpose in life via self-esteem was significant ($B = 1.77$, Bootstrapped $SE = 0.41$, 95% CI [1.0464, 2.6526]), whereas the indirect effect via locus of control was nonsignificant ($B = 0.35$, Bootstrapped $SE = 0.21$, 95% CI [-0.0204, 0.7824]). Together, these results suggest partial mediation of ego identity through self-esteem. Locus of control was not a mediator, nor did it have a direct effect.

Discussion

The present study examined the mediating roles of self-esteem and locus of control in the relationship between ego identity and purpose in life among a sample of college students from various ages. Consistent with Eriksonian (1959) developmental theory, results demonstrated that ego identity was positively associated with purpose in life and that this association was partially mediated by self-esteem. In contrast, locus of control did not mediate or significantly predict purpose in life once ego identity and self-esteem were considered simultaneously. These findings provide new insight into the mechanisms through which identity integration supports a sense of meaning and direction during young adulthood.

Ego integrity has traditionally been conceptualized as a final psychosocial resolution in Erikson's (1959, 1982) life-span theory—a state of acceptance, coherence, and reconciliation with one's past that allows for wisdom and existential peace. This stage is predicated on formation of identity (Sneed et al., 2006). Although Erikson placed finalized integrity of the ego and its identity primarily in late adulthood, more recent research supports its relevance across adulthood (Whitbourne et al., 2002; Westerhof et al., 2017). The present study adds to this growing evidence by demonstrating that ego identity, even among younger adults, predicts a greater sense of purpose in life. Adults who perceive their lives as coherent and meaningful appear more capable of identifying long-term goals and personal direction.

The mediating role of self-esteem reinforces the view that self-acceptance functions as an important psychological bridge between identity integration and existential purpose. Individuals high in ego identity tend to exhibit more positive self-regard, perhaps because they interpret their life narratives in a way that emphasizes personal growth rather than regret or self-criticism (Bauer & McAdams, 2004). This self-affirming orientation likely supports a sense of agency and optimism that facilitates purposeful striving. The indirect effect observed in this study aligns with theoretical perspectives suggesting that global self-worth underlies the motivational capacity to pursue meaning (Steger et al., 2008; Schlegel & Hicks, 2011).

More broadly, this mediation pathway draws attention to the interconnectedness of self-concept processes in personality development. Erikson viewed identity formation, ego identity, and self-acceptance as mutually reinforcing aspects of psychosocial maturity. Research by Ryff

and Keyes (1995) similarly identifies self-acceptance as a central dimension of psychological well-being, closely intertwined with personal growth and purpose in life. From this perspective, individuals with greater ego identity may view their experiences, including failures, as integrated elements of a meaningful life story, which fosters both self-esteem and purpose. This integrative process mirrors the life story identity model proposed by McAdams (1993, 2013), wherein coherence and redemption themes in one's narrative enhance both positive self-evaluation and a sense of purpose.

Interestingly, locus of control did not show significant direct or indirect effects on purpose in life once ego identity and self-esteem were entered into the model. This null finding suggests that control beliefs may be less central to existential meaning than to other adaptive outcomes such as academic performance or stress coping. Locus of control, as originally defined by Rotter (1966), reflects generalized expectancies regarding the contingency between one's actions and outcomes. While internal control orientation has been associated with achievement motivation and lower anxiety (Lefcourt, 2014), its link to existential constructs such as purpose and coherence appears weaker.

One explanation is that purpose in life involves transcending rather than controlling one's circumstances. Individuals with a stronger sense of purpose may interpret both controllable and uncontrollable experiences as meaningful components of a broader life narrative. Ego identity, by fostering acceptance of life's ambiguity and imperfection, might render perceived control less relevant to meaning making. Consistent with this idea, Ryff and Singer (1998) found that meaning and purpose are more closely tied to self-realization and authenticity than to perceptions of control. Moreover, locus of control may operate as a domain-specific variable—more predictive of academic or occupational functioning than of existential outcomes (Skinner, 1996). The lack of mediation in this study could therefore reflect a mismatch between the generality of the locus construct and the evaluative nature of purpose in life.

Developmentally, the finding also aligns with Arnett's (2000) conception of younger adulthood as a period of identity exploration characterized by fluctuating perceptions of control. College students, even across nontraditional age groups, may not have stable control expectancies, but they can still develop purpose through narrative reflection and self-acceptance. Thus, ego identity and self-esteem may serve as foundational antecedents of purpose even before locus of control becomes a reliable predictor of adult adaptation.

These results contribute to ongoing debates in developmental and personality psychology regarding the structure of self-related constructs and their roles in well-being. The present findings support models that emphasize the hierarchical nature of self-concept organization: ego identity as an overarching integrative construct, self-esteem as a global evaluative component, and purpose as a motivational-existential outcome (Deci & Ryan, 2000; McAdams & Olson, 2010). The observed indirect effect through self-esteem is consistent with theories of self-determination and self-coherence, which posit that internalized self-acceptance fosters autonomous goal pursuit and meaning making.

Furthermore, the study underscores Erickson's (1959, 1982) suggestion that ego identity may be a lifelong process across adulthood. This is consistent with contemporary identity theorists' (e.g., Whitbourne & Sneed, 2002; Bauer et al., 2008) argument that individuals continually revise

and integrate their life narratives, suggesting that ego identity functions as a dynamic personality variable rather than a static end-state. Within this framework, self-esteem may act as a moment-to-moment indicator of successful integration; when the self is accepted, coherence is achieved, and purpose emerges naturally.

From an applied perspective, these findings have practical relevance for promoting psychological well-being. Interventions that emphasize life reflection, self-acceptance, and narrative integration, rather than solely goal setting or control-based techniques, may be especially effective for fostering purpose. Programs such as life review exercises or meaning-centered workshops could help students contextualize their experiences, affirm personal strengths, and internalize a coherent sense of identity (Westerhof et al., 2017). Because self-esteem emerged as the key mediating factor, efforts to enhance self-worth through cognitive restructuring or self-compassion training may also indirectly promote purpose in life.

Educational institutions might integrate reflective writing, mentoring, and strengths-based counseling to help students link their developing identities to broader life purposes. These approaches align with research showing that purpose development enhances academic engagement, psychological resilience, and well-being (Damon et al., 2003; Hill et al., 2016). Strengthening self-esteem and integrative self-understanding may therefore serve as interventions with broad benefits that “ripple” out into other aspects of one’s perspective.

Several limitations to this study should be noted. First, design was cross-sectional which does not allow causal inference; while ego identity theoretically precedes self-esteem and purpose, longitudinal data are needed to confirm temporal order. Second, all variables were assessed through self-report, introducing potential biases such as social desirability and shared method variance. Incorporating behavioral or narrative measures of ego identity (e.g., coded life stories; McAdams, 2013) could strengthen future work. Third, the sample consisted of college students, a group that may differ from other populations in both ego development and meaning making. Replication in other groups of adults including older samples would clarify whether the same pathways operate when ego identity is more fully consolidated.

Another limitation involves the measures used. The relatively low internal consistency reliability of ego identity and locus of control measures in this study should be noted. These may have attenuated the observed relationships. Additional research using more reliable measures is needed to replicate the current results. Also, the brief locus of control scale (Valecha & Ostrom, 1974) captures a generalized expectancy but may lack sensitivity to domain-specific control beliefs relevant to life purpose. Future studies could examine domain-specific control (e.g., existential, academic, interpersonal) to determine whether certain aspects of control interact more strongly with purpose and self-esteem. Additionally, research could test potential moderators such as optimism, emotional regulation, or personality traits (e.g., openness, conscientiousness) to identify boundary conditions of the observed mediation model.

In summary, this study highlights self-esteem as a critical psychological mechanism linking ego identity and purpose in life during young adulthood. Individuals who achieve a coherent and accepting view of their experiences are more likely to experience high self-worth, which in turn promotes a stronger sense of meaning and direction. Locus of control, though often associated with adaptive functioning, did not contribute uniquely to this process, suggesting that existential

purpose depends more on self-acceptance than on perceived control. Together, these findings add evidence to the enduring relevance of Eriksonian concepts for understanding personality integration and meaning making in contemporary college populations.

Conflicts of Interest: The author declares no conflicts of interest.

Funding: This research received no specific funding.

Editor's Note: The author's name appears under a pseudonym. The editor has verified the author's identity which is withheld to protect the author's privacy and safety.

References

- Arnett, J. J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. *American Psychologist*, 55(5), 469–480. <https://doi.org/10.1037/0003-066X.55.5.469>
- Arnett, J. J. (2008). The neglected 95%: Why American psychology needs to become less American. *American Psychologist*, 63(7), 602–614. <https://doi.org/10.1037/0003-066X.63.7.602>
- Bauer, J. J., & McAdams, D. P. (2004). Growth goals, maturity, and well-being. *Developmental Psychology*, 40(1), 114–127. <https://doi.org/10.1037/0012-1649.40.1.114>
- Bauer, J. J., McAdams, D. P., & Pals, J. L. (2008). Narrative identity and eudaimonic well-being. *Journal of Happiness Studies*, 9(1), 81–104. <https://doi.org/10.1007/s10902-006-9021-6>
- Bauer, J. J., Park, S. W., Montoya, R. M., & Wayment, H. A. (2015). Growth motivation toward two paths of eudaimonic self-development. *Journal of Happiness Studies: An Interdisciplinary Forum on Subjective Well-Being*, 16(1), 185–210. <https://doi.org/10.1007/s10902-014-9504-9>
- Benassi, V. A., Sweeney, P. D., & Dufour, C. L. (1988). Is there a relation between locus of control orientation and depression? *Journal of Abnormal Psychology*, 97(3), 357–367. <https://doi.org/10.1037/0021-843X.97.3.357>
- Bronk, K. C., Hill, P. L., Lapsley, D. K., Talib, T. L., & Finch, H. (2009). Purpose, hope, and life satisfaction in three age groups. *The Journal of Positive Psychology*, 4(6), 500–510. <https://doi.org/10.1080/17439760903271439>
- Crumbaugh, J. C. (1968). Cross-validation of Purpose in Life test based on Frankl's concepts. *Journal of Individual Psychology*, 24(1), 74–81
- Damon, W., Menon, J., & Bronk, K. C. (2003). The development of purpose during adolescence. *Applied Developmental Science*, 7(3), 119–128. https://doi.org/10.1207/S1532480XADS0703_2
- Deci, E. L., & Ryan, R. M. (2000). The “what” and “why” of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227–268. https://doi.org/10.1207/S15327965PLI1104_01

- Erikson, E. H. (1959). *Identity and the life cycle*. International Universities Press.
- Erikson, E. H. (1982). *The life cycle completed*. Norton.
- Hayes, A. F. (2018). *Introduction to mediation, moderation, and conditional process analysis* (2nd ed.). Guilford Press.
- Heine, S. J., Proulx, T., & Vohs, K. D. (2006). The meaning maintenance model: On the coherence of social motivations. *Personality and Social Psychology Review*, 10(2), 88–110. https://doi.org/10.1207/s15327957pspr1002_1
- Hill, P. L., Burrow, A. L., & Bronk, K. C. (2016). Persevering with positivity and purpose: An examination of purpose commitment and positive affect as predictors of grit. *Journal of Happiness Studies: An Interdisciplinary Forum on Subjective Well-Being*, 17(1), 257–269. <https://doi.org/10.1007/s10902-014-9593-5>
- Judge, T. A., Erez, A., Bono, J. E., & Thoresen, C. J. (2002). Are measures of self-esteem, neuroticism, locus of control, and generalized self-efficacy indicators of a common core construct? *Journal of Personality and Social Psychology*, 83(3), 693–710. <https://doi.org/10.1037//0022-3514.83.3.693>
- Kernis, M. H., & Goldman, B. M. (2006). A multicomponent conceptualization of authenticity: Theory and research. In M. P. Zanna (Ed.), *Advances in experimental social psychology*, Vol. 38, pp. 283–357). Elsevier Academic Press. [https://doi.org/10.1016/S0065-2601\(06\)38006-9](https://doi.org/10.1016/S0065-2601(06)38006-9)
- King, L. A. (2001). The hard road to the good life: The happy, mature person. *Journal of Humanistic Psychology*, 41(1), 51–72. <https://doi.org/10.1177/0022167801411005>
- Lefcourt, H. M. (2014). *Locus of control: Current trends in theory & research* (2nd ed.). Psychology Press.
- McAdams, D. P. (1993). *The stories we live by: Personal myths and the making of the self*. Guilford Press.
- McAdams, D. P. (2013). The psychological self as actor, agent, and author. *Perspectives on Psychological Science*, 8(3), 272–295. <https://doi.org/10.1177/1745691612464657>
- McAdams, D. P., & Olson, B. D. (2010). Personality development: Continuity and change over the life course. *Annual Review of Psychology*, 61, 517–542. <https://doi.org/10.1146/annurev.psych.093008.100507>
- Orth, U., & Robins, R. W. (2014). The development of self-esteem. *Current Directions in Psychological Science*, 23(5), 381–387. <https://doi.org/10.1177/0963721414547414>
- Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton University Press.
- Routledge, C., Arndt, J., Sedikides, C., & Wildschut, T. (2010). A blast from the past: The terror management function of nostalgia. *Journal of Experimental Social Psychology*, 46(1), 132–140. <https://doi.org/10.1016/j.jesp.2006.11.001>
- Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology*, 57(6), 1069–1081. <https://doi.org/10.1037/0022-3514.57.6.1069>
- Ryff, C. D., & Keyes, C. L. (1995). The structure of psychological well-being revisited. *Journal of personality and social psychology*, 69(4), 719–727. <https://doi.org/10.1037//0022-3514.69.4.719>

- Ryff, C. D., & Singer, B. (1998). The contours of positive human health. *Psychological Inquiry*, 9(1), 1–28. https://doi.org/10.1207/s15327965pli0901_1
- Schlegel, R. J., & Hicks, J. A. (2011). The true self and psychological health: Emerging evidence and future directions. *Social and Personality Psychology Compass*, 5(12), 989–1003. <https://doi.org/10.1111/j.1751-9004.2011.00401.x>
- Schulenberg, S. E., Schnetzer, L. W., & Buchanan, E. M. (2011). The Purpose in Life Test–Short Form: Development and psychometric support. *Journal of Happiness Studies*, 12(5), 861–876. <https://doi.org/10.1007/s10902-010-9231-9>
- Sneed, J. R., Whitbourne, S. K., & Culang, M. E. (2006). Trust, identity, and ego integrity: Modeling Erikson's core stages over 34 years. *Journal of Adult Development*, 13(3-4), 148–157. <https://doi.org/10.1007/s10804-007-9026-3>
- Sowislo, J. F., & Orth, U. (2013). Does low self-esteem predict depression and anxiety? *Psychological Bulletin*, 139(1), 213–240. <https://doi.org/10.1037/a0028931>
- Steger, M. F., Kashdan, T. B., Sullivan, B. A., & Lorentz, D. (2008). Understanding the search for meaning in life. *Journal of Personality*, 76(2), 199–228. <https://doi.org/10.1111/j.1467-6494.2007.00484.x>
- Tan, A. L., Kendis, R. J., Fine, J. T., & Porac, J. (1977). A short measure of Eriksonian ego identity. *Journal of Personality Assessment*, 41(3), 279–284. https://doi.org/10.1207/s15327752jpa4103_9
- Valecha, G. L., & Ostrom, T. M. (1974). An abbreviated measure of internal–external locus of control. *Journal of Personality Assessment*, 38(4), 369–376. <https://doi.org/10.1080/00223891.1974.10119987>
- Walters, L. H., & Klein, A. E. (1980). A cross-validated investigation of the Crumbaugh Purpose-in-Life test. *Educational and Psychological Measurement*, 40(4), 1065–1071. <https://doi.org/10.1177/001316448004000434>
- Westerhof, G. J., Bohlmeijer, E. T., & McAdams, D. P. (2017). The relation of ego integrity and despair to personality traits and mental health. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences*, 72(3), 400–407. <https://doi.org/10.1093/geronb/gbv062>
- Whitbourne, S. K., Sneed, J. R., & Skultety, K. M. (2002). Identity processes in adulthood. *Identity*, 2(1), 29–45. https://doi.org/10.1207/S1532706XID0201_03
- Twenge, J. M., & Campbell, W. K. (2001). Age and birth cohort differences in self-esteem: A cross-temporal meta-analysis. *Personality and Social Psychology Review*, 5(4), 321–344. https://doi.org/10.1207/S15327957PSPR0504_3